

Warranty Contracting

What does the world have in store for us?

John D'Angelo

FHWA

Office of Pavement Technology

Action Drivers

- What is the driver behind all our actions?
 - Highway systems that perform well.



Rutting

Fatigue Cracking



Low Temperature Cracking





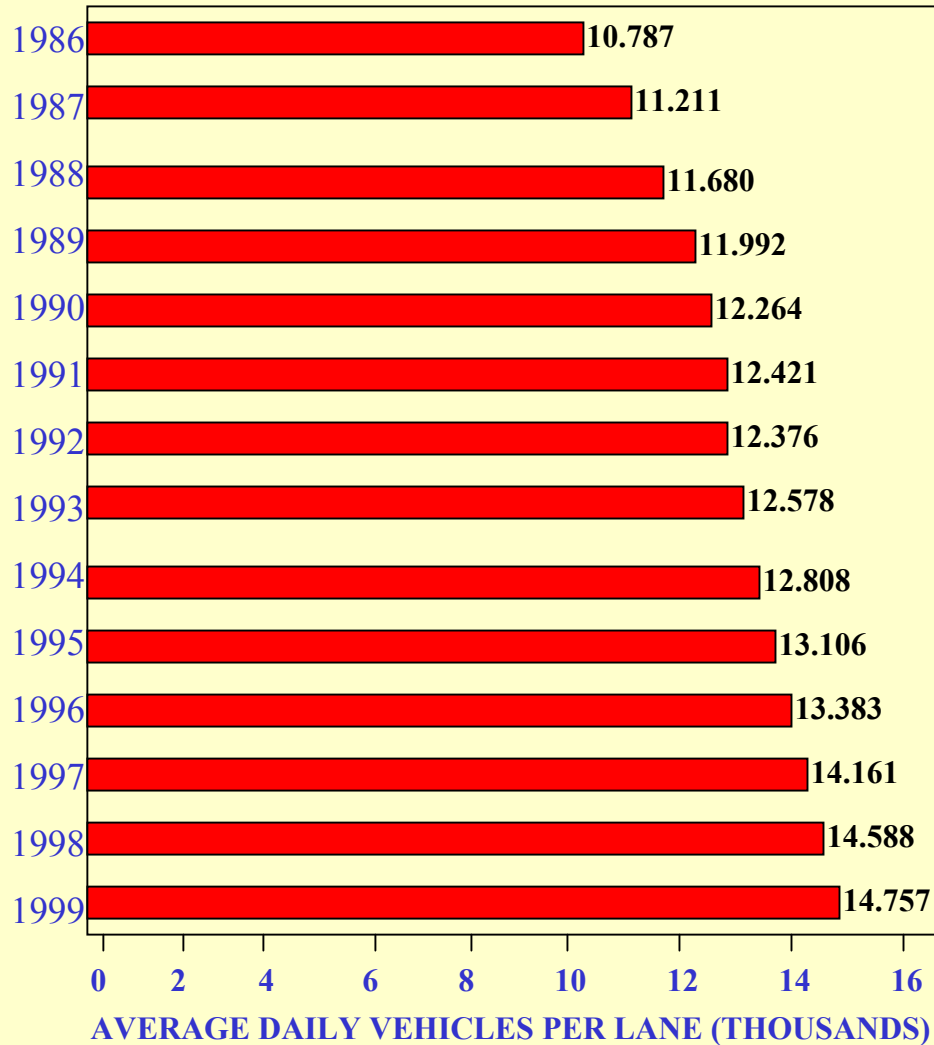
What is the cost of poor performance?

Vehicle Operating Costs

- Driving on roads in need of repair and improvement cost motorists additional vehicle operating costs (VOC).
- Nationally, motorists pay \$222 each in extra VOC per year.
- **\$ 41,500,000,000 per year !**

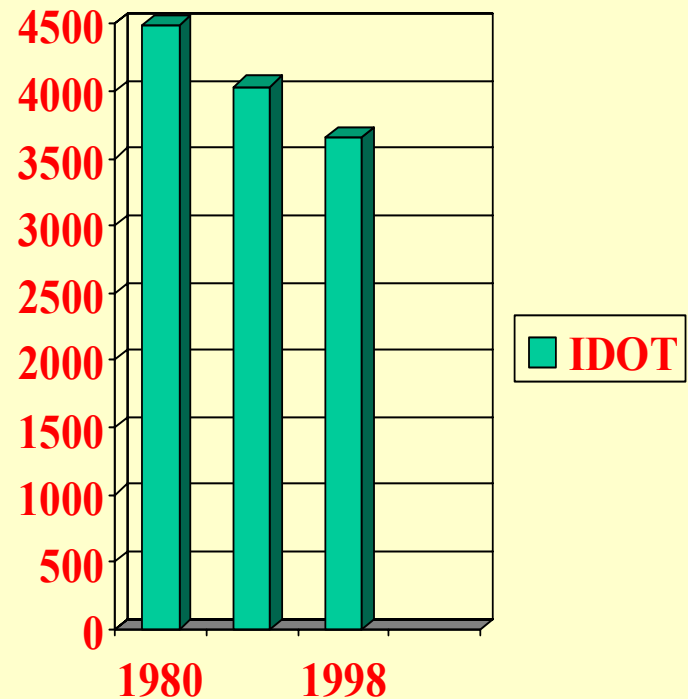
Highways are More Congested

AVERAGE DAILY VEHICLES PER LANE

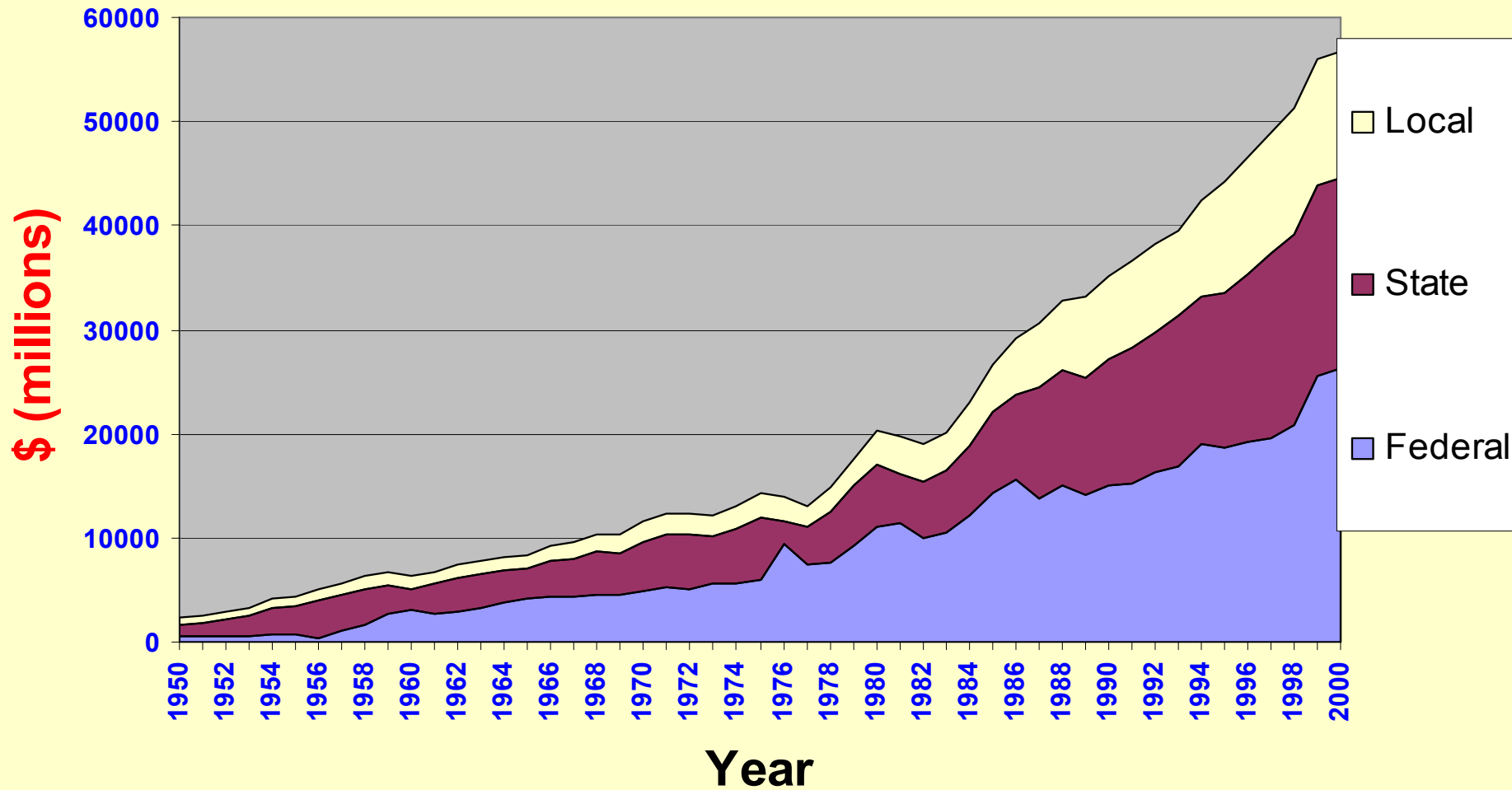


States Reduce DOT Employees

- IOWA – Last 20 Years
- 18.5% Reduction in Employees
- Highway Spending Triples



Capital Outlay



CONTRACTING METHODS MUST CHANGE

- Fewer State DOT Employees
- More \$\$
- Higher Public Expectations
 - More Congestion
 - Still too Many Fatalities



Contract Administration

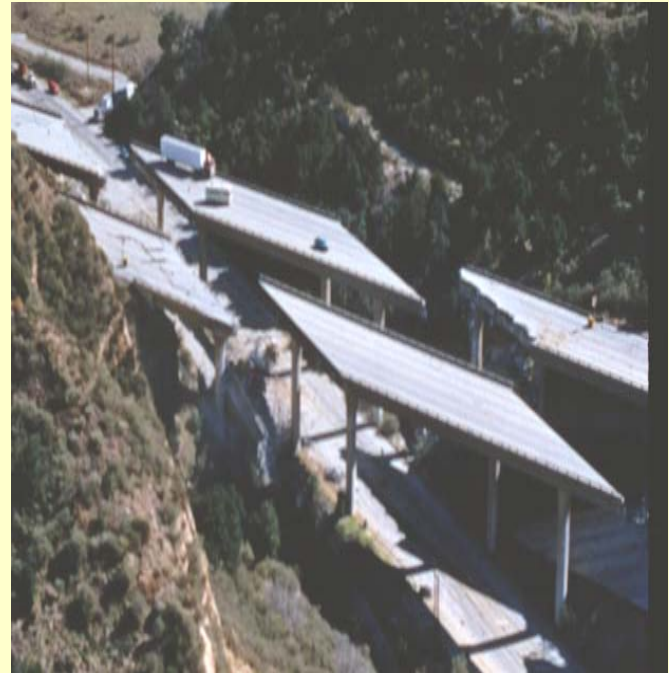
“Before 1990”

- One Size Fits All
 - 100% Complete Plans, Specifications, & Engineering
 - All Qualified Bidders
 - Award to Lowest Bidder
 - No Warranties



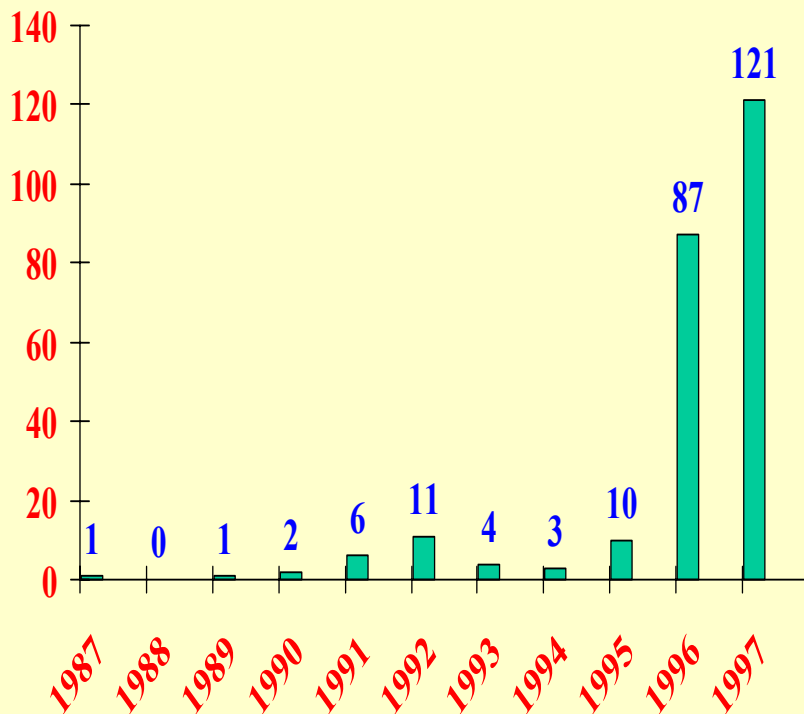
Evolution of Alternative Contracting in the US

- TRB Circular 386
“Innovative Contracting Practices” (1988)
- FHWA Special
Experimental Project - 14
(1990)
- FHWA “Main-Streams”
most AC methods (1995)

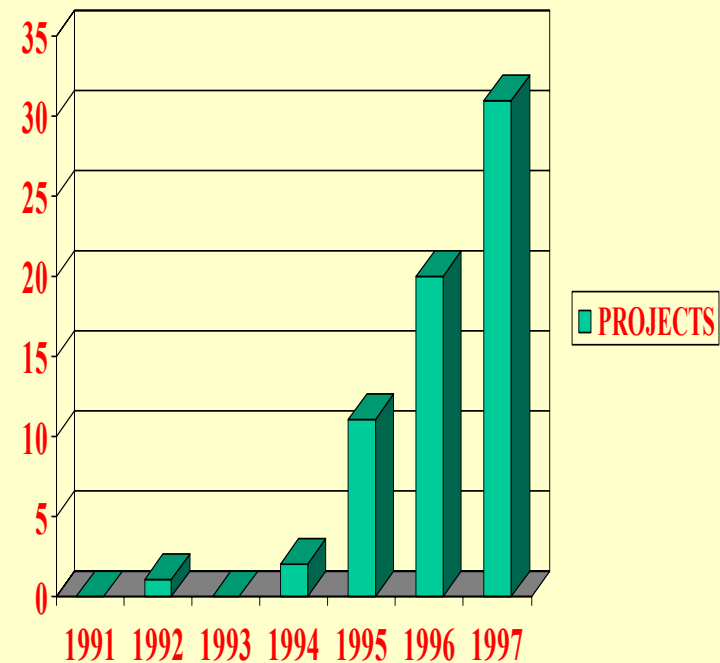


Alternative Contracting in 1990s

Warranties

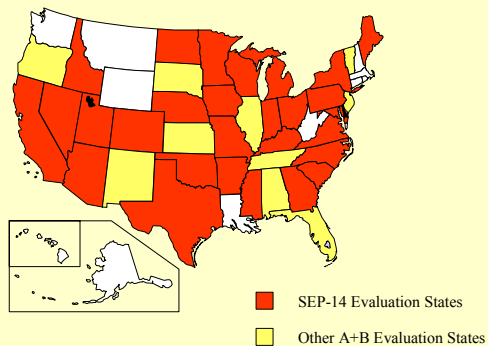


Design-Build

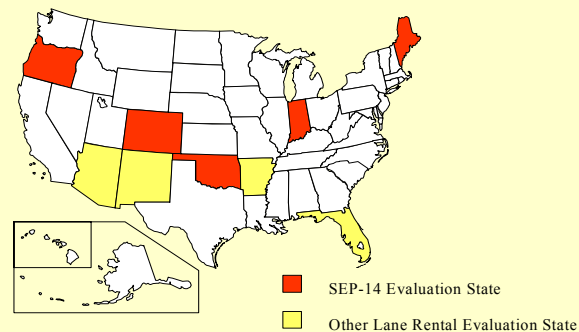


Alternative Contracting in US TODAY

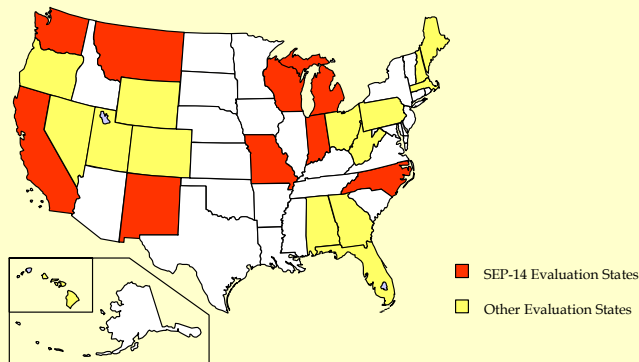
Cost-Plus-Time Bidding Evaluation States



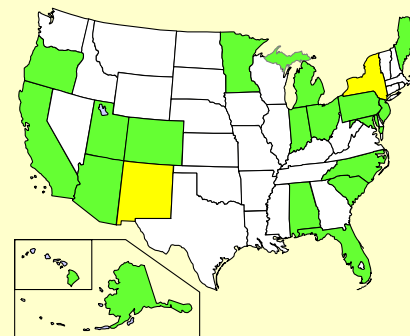
Lane Rental Evaluation States



Warranty Evaluation States

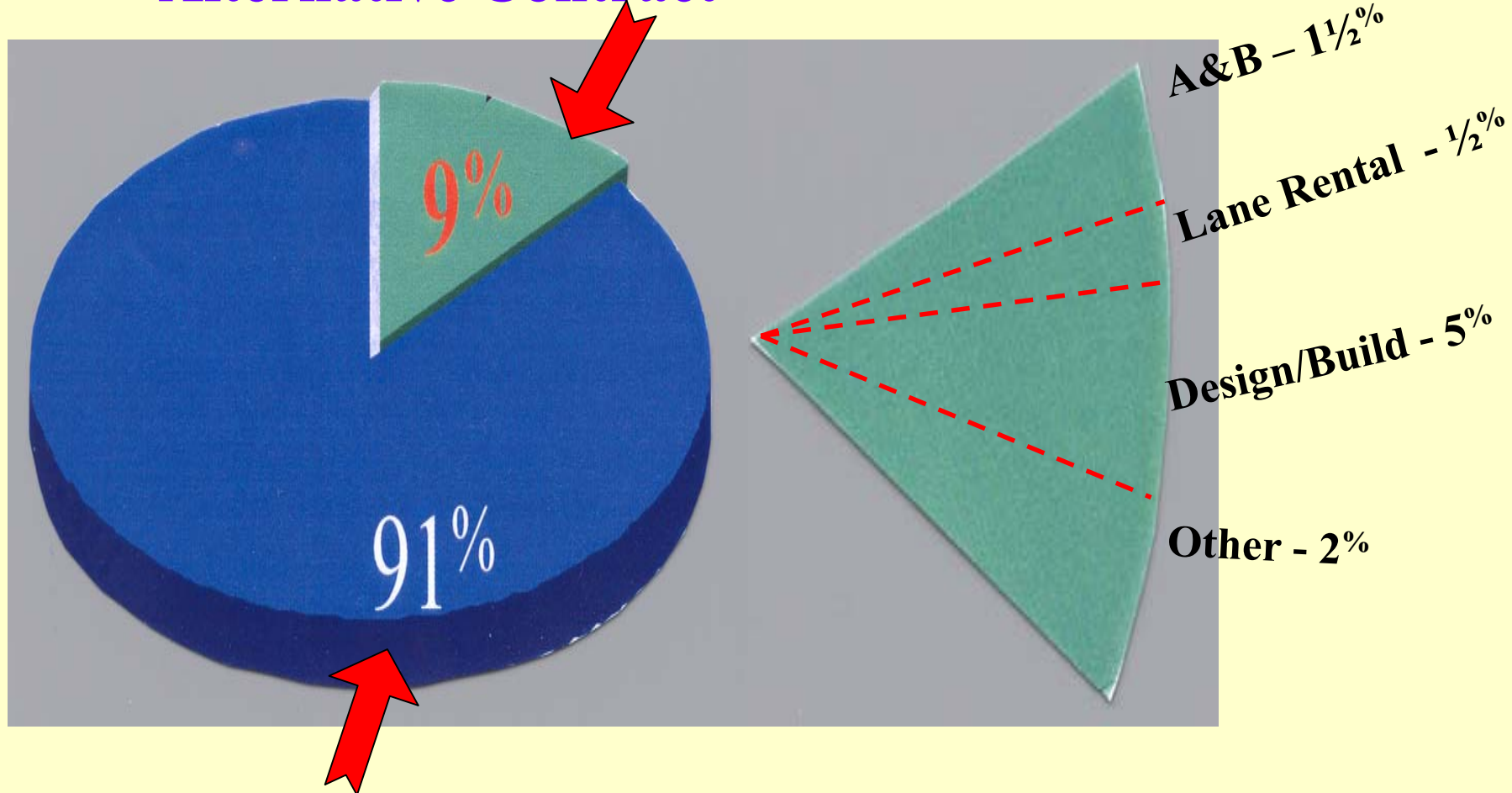


States Currently Using Design-Build Under SEP-14



Current Contract type in U.S.

Alternative Contract



Low Bid Award

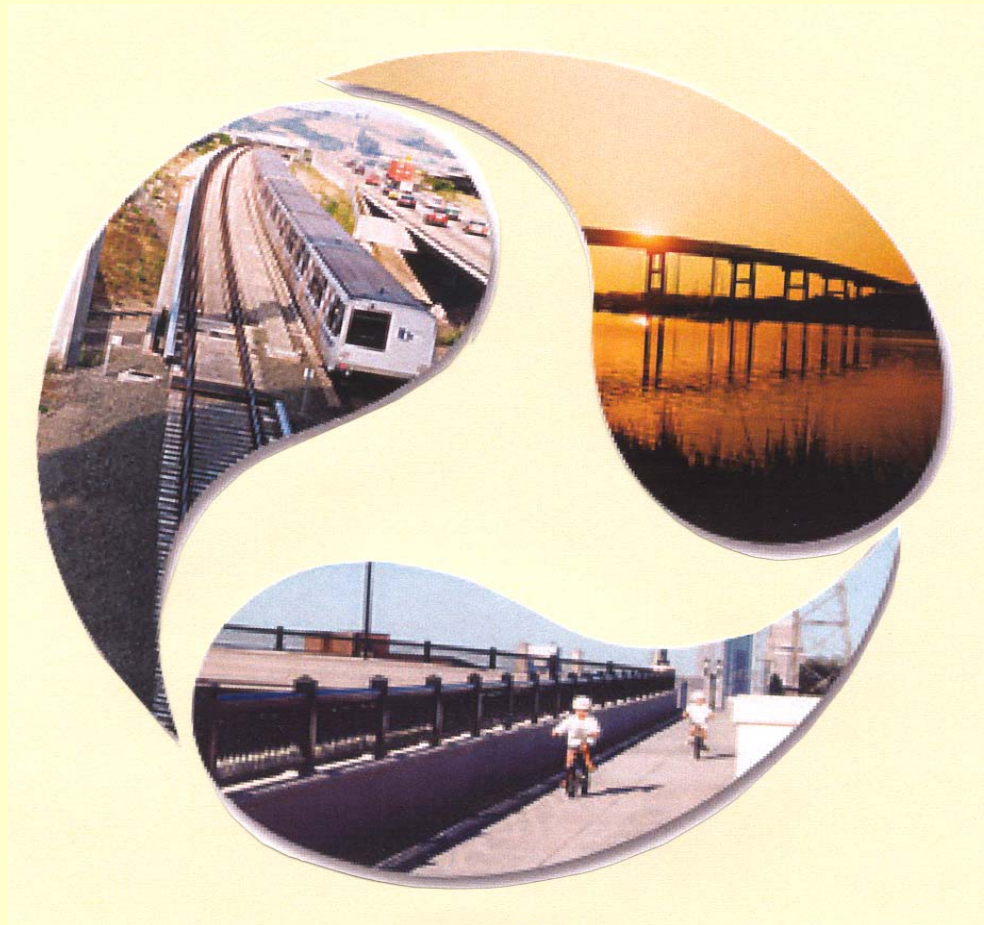
How do we make the needed changes?

- Learn from the experience of others.
- Create trial projects.
- Give up our old ways.



CONTRACT ADMINISTRATION SCAN

JUNE 2001



WHY EUROPE?

- Benefit from their expertise
- Learn new methods
- Learn how to improve “old methods”
- Share experiences

Drivers for Change in Europe

- Inadequate Public Funding
- Claims Environment
- Cost Overruns
- Slow Delivery/
Delays
- Growing Needs
- Adversarial Relationships
- Inadequate Staff
- Perceived Lack of Maintenance Efficiency
- Political Discontent
- User Frustration
- EU Relationships
- Create Innovation in Delivery

EUROPE



New Ideas from European

**Alternative
Financing**

Concessions

**Contracting
Techniques**

**Performance
Contracting**

Design-Build

**Active Asset
Management**



European System

- Program
 - Shadow Tolls for DBOM & DBFO
 - Public Private Partnership projects
 - Numerous Private Financing Initiatives
 - Many Long Term Concession Contracts

European System

- Combined Network and Maintenance Contract
- High Use of Incentives
- Very Strong Performance Contracting program in the Building Sector
- Innovative Asset Management System

Primary Findings

- Europe is Better Leveraging the Private Sector Efficiencies and Strengths
- User Focus with Equitable Transfer of Risk
- A Higher Level of Trust Exists Between Public and Private Sectors
- Most Tools Are Directly and Immediately Implementable

Contracting Techniques

Procurement

- Transparent Uniform Process Enhances Competition
- Use of Best Value in All Types of Procurement
- Business Culture and Quality More Important than Technical Qualifications and Cost
- Confidential Negotiation Process - BAFO

Contracting Techniques

Contract Types

- DB, DBFO, & DBM
- AMPM
- Joint Development
- Concessions
- Target Pricing
- Two Phase Contracts
- Framework Contracts
- Strategic Partnering
- Alliancing
- Integrated Supply Chain Management
- Managing Agent Contract (MAC)
- Private Finance MAC

Design-Build

- Standard Method in Europe
- Outcome (Value) Specifications
- Early Contractor Involvement
- Higher Level of Partnering
- Life Cycle Cost Award (ROI & NPV)
- Maintenance
 - 30-year Concessions to Owners
 - 5-10 year Product Warranties in DB

Concessions

- Strategic Construction Plan through Concessions Program
- Operations through Concession Program
- Concession through Public, Quasi-Public or Private Company
- Variable Private Sector Equity Required
- Private Finance Initiatives

Performance Contracting

Warranty/Maintenance Contract Issues

- Materials and Workmanship Warranted for at Least 1-year w/some longer 5-years
- Widespread Use of 10-year Maintenance Contracts without Additional Warranties
- 30 Years Concessions in lieu of Warranties

Performance Contracting

Quality Control/Quality Assurance

- Contractor QC Alone with Some Owner Contracted QA
- Use of Stop or Control Points
- Use of Penalty Points and Quality Audits in Lieu of Heavy Owner Inspection
- Use of Penalty Card System Based Upon Failure to Respond to Warning Notices

Performance Contracting

Performance Specifications

- Used Most Widely in Maintenance Contracts
 - Operating and Turn-back Levels Specified
- Concessions Agreements Exclusively Use Operating and Turn Back Performance Levels

Asset Management

Techniques Used

- 2-year Assessment of Maintainable Items
- Annual Condition of Pavement and Bridges
- Condition Assessment Is Used in Budget Development

Asset Valuation

- Depreciation Standards are Not Used
- Assets Valued at Replacement Cost

Asset Management

Outcomes of Asset Management

- Move to Outsourcing as a Predominant Method
- Managing Agent Contract (MAC)
- Long-term Contracts (5-10 Years)
- Concessionaire Developing Asset Management Program in Lieu of the Owner

European Asphalt Warranty Scan planned for Sept. 2002

- Scan goals to determine:
 - Methodologies used to determine risk assessment for the government agency and contractor.
 - Methodologies for administration of warranty contracts.
 - Methodologies to select criteria to account for traditional performance indicators of rutting, fatigue cracking and low temperature cracking.

European Warranty Scan planned for Sept. 2002

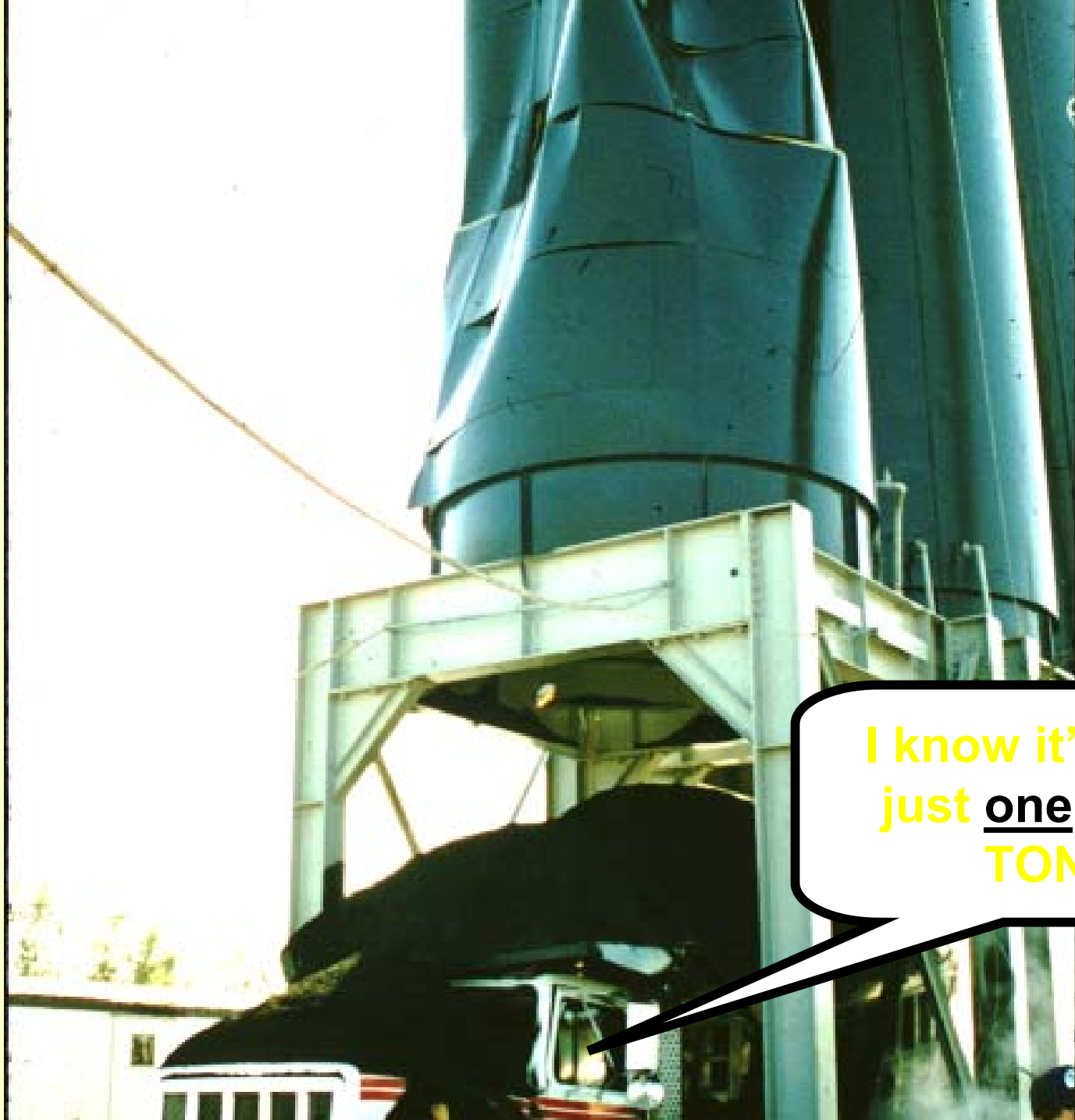
- Scan goals to determine:
 - Practices to maintain prescribed levels of asphalt pavement smoothness and skid resistance.
 - Criteria used in successful asphalt pavement warranties.
 - Pavement performance prediction tools.

A photograph of an industrial facility, likely a power plant or refinery, featuring large concrete structures and tall smokestacks. Thick black smoke billows from one stack, while white steam or smoke rises from another. The scene is set against a bright, overexposed sky. The text "Not Every Day is a Good Day!" is overlaid in a red, serif font with a black outline.

Not Every Day is a Good Day!



Or even half good



I know it'll hold
just one more
TON!

Conclusions

- US Highways Agencies Should Better Utilize Private Sector Efficiencies & Strengths
- A Higher Level of Trust Must Be Established in Our Industry
- Pilot Projects Should be Implemented to Test the Tools & Techniques Uncovered on the Scan

The background of the image is a dramatic landscape at sunset or sunrise. The sky is filled with dark, heavy clouds, and a bright sun is partially obscured by them, creating a strong lens flare and illuminating the scene with a warm, golden light. The sun's rays are visible breaking through the clouds. In the foreground, there is a dark, silhouetted area that appears to be a body of water or a field, reflecting the light from the sky. The overall mood is serene and majestic.

Thank You